

itself. Therefore the limitation of alternating DC sputtering has not been given patentable weight. Under that basis, claims 1 and 2, regardless of the mode of sputtering which is not germane to the film formed are not patentably distinct." The Examiner requests correction of the informality.

Applicant respectfully submits that the claims as currently on file are not identical. When characteristics of a film are different from another film, there exists a difference in the structure between the two films. However, it is sometimes difficult to express a structure if or because a structure cannot be analyzed. Applicant has not discovered a way to determine the structure, nor analyze same. In such a case, Applicant should be allowed to express a structure by method, for example, heat oxide film, or deposited oxide film. Therefore, the expression of the invention as to Claim 1 and Claim 2 should be allowed and not objected to. Applicant respectfully submits that the Examiner has brought forth no additional facts leading to the conclusion that the films themselves are identical, thereby not giving the alternating DC sputtering technique patentable weight. Applicant respectfully requests this objection to be withdrawn.

Claims 1-2 and 10-11 stand anticipated by Takahashi et al. "Synthesis of Fe_{16}N_2 Films By Using A Reactive Plasma" (1993). Takahashi 1993, the Applicant respectfully points out, is not prior art because it is published by the inventor of this

application, Migaku TAKAHASHI. This application was filed within one year from Takahashi 1993.

Furthermore, the Examiner states that since the opposed DC sputtering is performed under the same plasma conditions, the film formed will inherently have the same properties.

Applicant respectfully points out that a number of conditions are different in the present invention. The total pressure in the present invention is different, along with the heat treatment conditions. In this case, the heat treatment is done in a vacuum furnace, further after forming a film, the film is once exposed to atmosphere conditions. Additionally, the rate of film formation is different. In the present case, the forming rate is approximately 200 Å/min.

The claims stand rejected as anticipated by A. Kano et al., "Metastable Fe Nitrides With High Bs Prepared By Reactive Sputtering", J. Appl. Phys. 53(11), Nov. 1982, pp 8332-8334. Applicant respectfully submits that the Kano reference is different than the present invention. Kano discloses a substrate temperature which is less than 200°. This does not mean that the film is formed at room temperature, 200° and room temperature are vastly different. Further, Kano varies the target voltage; however, this does not mean the Kano generates a range of electron densities which will overlap or encompass the same film, as in the present invention. Because electron densities depend



on number of conditions, for example, total pressure, distance
of electrode, flow rate, and etc., the conditions described in
Kano and in the present invention are vastly different.

Therefore, varying the target voltage does not conclusively mean
that electron density overlap occurs.

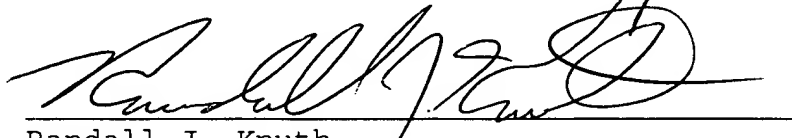
Applicant respectfully requests the 102 and 103 rejections
to be withdrawn.

Claims 1-2 and 10-11 stand provisionally rejected under
obviousness-type double patenting over co-pending application
08/765,836. Such provisional rejection is noted; however, the
'836 application as not been allowed or issued.

Applicant respectfully requests that a Notice of
Allowability is forwarded to the undersigned.

If the Examiner has any questions or comments that would
speed prosecution of this case, he is invited to call the
undersigned at 219/485-6001.

Respectfully submitted,


Randall J. Knuth
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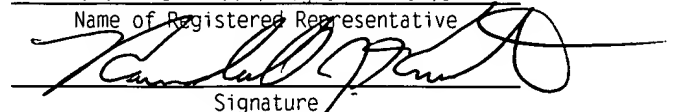
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Randall J. Knuth, Regis. No. 34,644

Name of Registered Representative



Signature

August 22, 2000

Date